

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2000-NM-394-AD; Amendment 39-12758; AD 2002-10-12]**

**RIN 2120-AA64**

### **Airworthiness Directives; Boeing Model 737-100, -200, -200C, -300, -400, and -500 Series Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. For certain airplanes, this amendment requires a one-time inspection or a review of the maintenance records of the airplane to determine if a particular control rod barrel for the aileron tabs is installed, and follow-on repetitive inspections for cracking of the control rod barrels and replacement of the control rod barrels with new barrels, if necessary. Such replacement terminates the repetitive inspections. For all airplanes, this amendment prohibits installation of a certain control rod barrel for the aileron tabs. The actions specified by this AD are intended to prevent the disconnection of an aileron tab, which could lead to severe airframe vibrations; consequent damage to the aileron tab, aileron, and wing; and possible loss of controllability of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective June 27, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 27, 2002.

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Sue Lucier, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2186; fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes was published in the Federal Register on September 4, 2001 (66 FR 46247). For certain airplanes, that action proposed to require a one-time inspection or a review of the maintenance records of the airplane to determine if a particular control rod barrel for the aileron tabs is installed, and follow-on repetitive inspections for cracking of the control rod barrels and replacement of the control rod barrels with new barrels, if necessary. Such replacement would terminate the repetitive inspections. For all airplanes, that action proposed to prohibit installation of a certain control rod barrel for the aileron tabs.

## **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

## **Change Compliance Time**

One commenter asks that the compliance time specified in paragraph (b)(1) of the proposed rule be changed from flight cycles to flight hours. That paragraph specifies repeating the inspections of the control rod barrels at least every 3,200 flight cycles, and replacing the affected control rod barrels within 20,000 flight cycles. The commenter states that Boeing Special Attention Service Bulletin 737-27-1223, dated October 21, 1999, specifies repeating those inspections every 3,200 flight HOURS, and replacing affected control rod barrels within 20,000 flight HOURS.

The FAA agrees with the commenter. Our intent in the proposed rule was to mandate the compliance time specified in service bulletin. Since we did not intend to use flight cycles, and did not include a difference paragraph declaring our intent to use flight cycles, this change does not expand the scope of the final rule. We have changed paragraph (b)(1) of this final rule accordingly.

## **Clarify Paragraph (b)(2)**

One commenter asks for clarification of paragraph (b)(2) of the proposed rule. The commenter states that the paragraph specifies replacement of all control rod barrels if any cracking is found. The commenter notes that, per data received from the manufacturer, the gray colored control rod barrels do not need to be replaced even if the white control rod barrels are found cracked.

We agree with the commenter. We have changed paragraph (b)(2) of the final rule for clarification to read, "If any cracking is found, before further flight, replace all AFFECTED control rod barrels \*-\*-\*."

## **Extend Repetitive Inspection Interval**

One commenter states that the repetitive inspection interval specified in paragraph (b)(1) of the proposed rule would not allow operators sufficient time to first complete the initial inspection of the control rod barrels before doing the repeat inspections without scheduling aircraft down-time. The commenter asks that the interval be extended to 6,000 flight hours.

We do not agree with the commenter because it provided no justification for its request and no data to support that its suggestion would provide an acceptable level of safety were submitted. The specified repetitive interval is based on the recommendation of the manufacturer and on the schedule of the majority of operators. However, the commenter may apply for an approval of an alternate method of compliance, in accordance with paragraph (e) of this AD. No change is made to the final rule in this regard.

## **Alternate Method of Compliance**

One commenter asks that an X-ray or ultrasound inspection be allowed as an alternate to replacing the affected control rod barrels. The commenter states that these inspections would reveal defects without relying on the color of the paint; then, only the control rod barrels with such defects would be replaced, instead of all affected control rod barrels. The commenter adds that the control rod barrels also would be permanently marked after they are inspected, which would eliminate the need for removal and subsequent flight test.

The FAA does not agree with the commenter. No reliable method of inspecting for the defect in the control rod barrels has been submitted to the FAA, so no approval can be given for such inspections. In addition, the commenter did not provide sufficient technical details for the proposed inspections. However, we would consider this option under the provisions for requesting approval of an alternate method of compliance, as provided in paragraph (e) of this final rule, if substantiating data are provided. No change is made to the final rule in this regard.

## **Change Cost Impact**

One commenter states that the labor estimates in the proposed rule do not agree with the estimates in the referenced service bulletin. The commenter notes that there are a large number of fasteners that must be removed before removal of the panel that allows access to the control rod barrels, and a flight test is required if the rods are replaced or the adjustment is changed. The commenter adds that, although incidental costs are not included in the cost basis for rulemaking, the access requirements and flight test are not incidental and should be included in the cost analysis of the final rule.

We do not agree with the commenter. The cost impact information describes only the "direct" costs of the specific actions required by this AD. We recognize that, in accomplishing the requirements of any AD, operators may incur "incidental" costs in addition to "direct" costs. The cost analysis in AD rulemaking actions, however, typically does not include incidental costs, such as the time necessary to gain access to the control rod barrels and to perform a flight test. Because incidental costs may vary significantly from operator to operator, they are almost impossible to calculate. Therefore, no change is made to the final rule in this regard. We note that a flight test is only necessary if all four rod barrels are replaced.

## **Conclusion**

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Cost Impact**

There are approximately 2,900 airplanes of the affected design in the worldwide fleet. The FAA estimates that 1,250 airplanes of U.S. registry will be affected by this AD.

It will take approximately 1 work hour per airplane to accomplish the inspection to determine the color of the control rod barrels for the aileron tabs or the review of maintenance records, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the inspection or review required by this AD on U.S. operators is estimated to be \$75,000, or \$60 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

If subject control rod barrels are installed, it will take approximately 1 work hour per airplane to accomplish the follow-on inspections, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the follow-on inspections is estimated to be \$60 per airplane, per inspection cycle.

If subject control rod barrels are installed, it will take approximately 2 work hours per airplane to replace each control rod barrel, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of this replacement is estimated to be \$120 per airplane. Up to four control rod barrels (two for each aileron) may need to be replaced on each airplane.

### **Regulatory Impact**

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "[www.airweb.faa.gov/rgl](http://www.airweb.faa.gov/rgl)"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2002-10-12 Boeing:** Amendment 39-12758. Docket 2000-NM-394-AD.

**Applicability:** All Model 737-100, -200, -200C, -300, -400, and -500 series airplanes; certificated in any category.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent a disconnected aileron tab, which could lead to severe airframe vibrations; consequent damage to the aileron tab, aileron, and wing; and loss of controllability of the airplane; accomplish the following:

## **One-Time Inspection**

(a) Within 3,200 flight hours after the effective date of this AD, do paragraph (a)(1) or (a)(2) of this AD.

(1) Do a one-time general visual inspection to determine whether an aileron tab control rod barrel having part number 69-60083-1 is installed by determining the color of the control rod barrels, according to Boeing Special Attention Service Bulletin 737-27-1223, dated October 21, 1999. No further action is required by this AD for gray-colored control rod barrels. If any white-colored control rod barrel with part number 69-60083-1 is installed, or if the color or part number of any control rod barrel cannot be determined, do paragraph (b) of this AD.

(2) Review the maintenance records for the airplane to determine whether an aileron tab control rod barrel having part number 69-60083-1 is installed. If no control rod barrel with that part number is installed, no further action is required by this AD. If any control rod barrel with that part number is installed, do paragraph (b) of this AD.

**Note 2:** For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

### **Follow-On Actions: Repetitive Inspections and Replacement**

(b) For airplanes that have a control rod barrel for the aileron tabs having part number 69-60083-1 or a control rod barrel on which the color or part number cannot be determined: Within 3,200 flight hours after the effective date of this AD, do a detailed inspection for cracking of the affected control rod barrels according to Boeing Special Attention Service Bulletin 737-27-1223, dated October 21, 1999.

**Note 3:** For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) If no cracking is found, repeat the inspection for cracking at least every 3,200 flight hours, AND, within 20,000 flight hours after the effective date of this AD, replace all affected control rod barrels for the aileron tabs with new or reworked control rod barrels, according to the service bulletin. Such replacement terminates the repetitive inspections.

(2) If any cracking is found, before further flight, replace all affected (cracked, having part number 69-60083-1 or on which the color or part number cannot be determined) control rod barrels with new or reworked control rod barrels, according to the service bulletin.

**Note 4:** If any control rod barrel for the aileron tab is cracked, all affected control rod barrels on the airplane must be replaced at the same time because the discrepancy may exist in the entire lot of parts.

### **Reporting Requirement**

(c) If any cracked control rod barrel for the aileron tabs is found during the inspections required by paragraph (b) of this AD, report findings to the FAA Certification Management Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056, at the applicable time specified in paragraph (c)(1) or (c)(2) of this AD. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

(1) For airplanes on which the inspection is accomplished after the effective date of this AD: Submit the report within 10 days after performing the inspection required by paragraph (b) of this AD.

(2) For airplanes on which the inspection has been accomplished prior to the effective date of this AD: Submit the report within 10 days after the effective date of this AD.

## **Spares**

(d) For all airplanes: As of the effective date of this AD, no person may install a control rod barrel for the aileron tab having part number 69-60083-1 on any airplane.

## **Alternative Methods of Compliance**

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

**Note 5:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

## **Special Flight Permits**

(f) Special flight permits may be issued in accordance with § 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

## **Incorporation by Reference**

(g) Except as provided by paragraph (a)(2) of this AD, the actions shall be done in accordance with Boeing Special Attention Service Bulletin 737-27-1223, dated October 21, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

## **Effective Date**

(h) This amendment becomes effective on June 27, 2002.

Issued in Renton, Washington, on May 14, 2002.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 02-12633 Filed 5-22-02; 8:45 am]

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